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SOME RARE PLANTS OF NEEDHAM, MASSACHUSETTS.

T. O. FULLER.

LIKE that of most towns in the vicinity of large cities, the flora of Needham is undergoing slow but continual changes, by the introduction of species foreign to its soil, and the extinction of some endemic ones which are so unfortunate as to grow only in the path of settlement. However desirable the increase of population may be in the view of the political economist, some of its accompaniments cause serious mischief for the lover of wild plants. He cannot see great roadside trees in their second century, giants which can never be replaced, cut down by order of their temporary owner because a small area of his field is shaded, without a feeling of indignation; and the extermination of a species from his township by the irresistible wave of improvement leaves a sense of keenest regret.

No doubt many species disappear whose loss is unnoticed; but a few instances have come under my observation. In the course of years some may perish from entirely natural causes. Such may have been the case with *Hottonia inflata*, which grew here sixty years ago, authenticated by specimens in my possession, collected by our first botanist, Dr. Josiah Noyes, in 1834. This species may have been torn up by ice in spring and carried away by floods. Dr. Noyes also found *Polygonella articulata* at two stations, and *Crotalaria sagittalis*, but neither grows here now.

Castilleja coccinea is of more recent extinction, and clearly by the hand of man. It flourished abundantly in one meadow thirty years ago, until a street was laid out directly through its home, and the traveling public, coming within view of the remaining plants, soon extirpated this beautiful native from our flora. Twenty years since *Aletris farinosa* was in our list, but the ground is now occupied by houses.

Lespedeza procumbens has been growing for seventy years in a narrow strip by the side of a constantly traveled road, where the wheels of carriages occasionally pass over the more aspiring stems. The widening of this road would surely destroy our only station.

The following rare species now growing in Needham, or in its immediate neighborhood, are confined to extremely limited areas, and are therefore exposed to extermination by what has been termed, not inaptly from our point of view, "the shabby tide of progress"; and it may be of interest to have a record of their present status.

Staphylea trifolia, L. In the second edition of Bigelow's *Florula Bostoniensis*, this is given as growing "In woods at Weston." The Middlesex County Flora, sixty-four years later, refers to Bigelow's statement, and says it has not since been reported in the county. It is not included in the Flora of Essex County, nor in Jackson's Worcester County List. I found it in Needham in 1883, growing among rocks, in low land in the woods, the tallest shrubs reaching a height of ten feet and a trunk diameter of one inch. It formed a small colony, remote from any house or public road, and could hardly have been planted by design in that retired forest. It usually flowers the first week in June, although in 1889 it was in full flower May 19. It is quite conspicuous while in bloom, but the flowers are early deciduous, falling off entire at the joint of the pedicel, for which reason it rarely matures fruit here.

Conioselinum Canadense, T. & G. This seems to be an extremely rare species in eastern Massachusetts. The only plants I have seen other than from Needham, were exhibited by the Massachusetts Horticultural Society in 1895, collected in Holbrook, Mass. William Oakes, in Hovey's Magazine of Horticulture, mentions finding "this long-overlooked species" in "Mast Swamp, Plymouth, Mass.," in 1839. I first met with it in Needham in 1883, near the source of Rosemary brook. It grows in very deep, black soil, which is constantly saturated with water, and shaded by large trees. It flowers from July 20 to the middle of August, and fruits abundantly. The leaves much resemble the fronds of *Botrychium Virginianum*. This is in danger of extermination, as the low land near it has been recently drained, preparatory to being offered for house-lots.

Lonicera caerulea, L. A space of ten feet in diameter in a large open meadow is covered with this species, profusely in flower the first two weeks in May. It is cut down every year when the grass is mowed, yet continues to flourish in spite of this discouragement.

Solidago tenuifolia, Pursh, grows in two places, both of narrow limits, a mile apart; one at the margin of a wet meadow; the other in a dry upland field.

Andromeda polifolia, L. Sparingly among low bushes in one meadow.

Liparis Loeselii, Richard. Collected at two stations in Needham, but has not been seen for several years.

Habenaria ciliaris, R. Br. The Dedham station for this rare species is inseparably associated with the late Mr. E. H. Hitchings. I well remember the animated story of his two hundred mile search, season after season, guided by the slenderest clew, before this ardent lover of our wild plants found the Yellow Orchis. His eighty years were but as twenty, and the most indifferent follower of Nature could not but share his pleasure. It grows there in dry soil, among Pitch Pines and *Osmunda* and *Pteris*. Some years only two or three plants flower, and seldom twenty. It is in perfection of bloom the last week in July and the first in August.

Smilacina trifolia, L. Abundant in a small, permanently wet bog, north of Great Plain Avenue, Needham, covering a space of twenty feet diameter, growing in sphagnum, shaded by Alders and Poison Sumach. It does not flower very freely, and I have never been able to find fruit. In flower May 10 to June 5.

Trisetum palustre, Torr. I have found this grass in two meadows in Needham, growing rather plentifully over considerable areas.

T. subspicatum, Beauv. var. *molle*, Gray. This unexpected variety I found in High Rock woods several seasons; a few plants scattered along for a hundred feet on a high, shaded ledge.

Eatonia Pennsylvanica, Gray. In one meadow.

E. Dudleyi, Vasey. In more than one piece of dry upland woods.

Camptosorus rhizophyllus, Link. In Eaton's Ferns of North America this is said to have "lately been found a few miles from Boston; but there is a doubt whether the station is truly natural." It was found in Needham in 1877, by Mr. Storrow Higginson, by whom the plants were shown to Mr. William Edwards of Natick. Mr. Edwards announced the discovery in the Bulletin of the Torrey Botanical Club, January, 1878, adding, "As it has never before been reported this side of Mt. Tom in the western part of the state, its presence here will be received with rejoicing by the many lovers of ferns in this quarter." In the same journal for the following month Mr. Davenport discussed its

origin here, and concludes that it is not indigenous, but must have been set out by some botanist. As, however, it still persists after twenty-two years left entirely to Nature's care, and manifests no tendency to decrease in either numbers or vigor, I incline to the opinion of Mr. Higginson, that it originated here through natural agencies, probably from wind-sown spores, long antecedent to its discovery. The plants grow in the crevices on one rock, which is only six feet through at the base, and five feet high. The fronds do not possess the luxuriant growth exhibited in its natural habitat, the largest fronds being nine to ten inches long, and five-eighths inch wide at base, with little disposition to produce auricles, or to root at the tips.

Lygodium palmatum, Swartz. This rare fern grows in Dover, adjoining Needham, where I have collected beautiful, fully fruited specimens. It occupies a small space in a shrubby pasture, the fronds climbing principally on *Spiraea salicifolia*.

FLORA OF THE POCONO PLATEAU.

THOMAS C. PORTER.

RHODORA is certainly a well-chosen name for the journal of the New England Botanical Club, both because of its euphony and because borrowed from a genus of plants represented by a solitary species, and that a hardy shrub which produces unique and beautiful flowers. And yet, this shrub, immortalized by Emerson in verse, is not, as some might suppose, confined to New England, for it exists elsewhere, in Canada and northern New York, and has, besides, a range much farther south. On the Pocono Plateau, embracing the western half of Monroe County, Pennsylvania, and portions of the adjoining counties, it flourishes in many places and when in full bloom, early in June, along with the *Azalea canadensis* of Michaux, fills the swamps and open woods with a glorious display. The latter sometimes attains the height of ten feet and is readily distinguished from the allied *A. nudiflora* by its hoary leaves and the single set of short gland-tipped hairs on the tube of the corolla.

The Pocono region, as well as the mountains to the north, south and west of it, has an elevation of from 2000 to 2300 feet above the sea, and hence its mean annual temperature is nearly that of the Adirondacks and Mount Desert Island. Lying, too, within the great boulder-line, it has been the theatre of immense glacial action, the results of